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EXAMINER	
DAO, THUY CHAN	
ART UNIT	**PAPER NUMBER**
2192	

NOTIFICATION DATE	DELIVERY MODE
08/13/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/621,207	GROVER ET AL.	
	Examiner	Art Unit	
	Thuy Dao	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-15 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-15 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment filed on May 12, 2008.

2. Claims 1-8, 10-15, and 17 have been examined.

Response to Amendments

3. In the instant amendments, claim 1 has been amended.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the instant application, the phrase in line 1 is considered to read as - - Techniques for handling exceptions [[are disclosed]]...- -. Appropriate correction is requested.

Response to Arguments

5. Applicants' arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections – 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-8, 10-15, and 17 are rejected because the claimed invention is directed to non-statutory subject matter:

Independent claim 1 directs to "[a]n exception handling mechanism", which may comprise only software components such as "an exception handler" 210 and "a recovery agent" 220 (FIG. 2 and related text).

Independent claim 10 directs to "[a] processing system", which may comprise only software components such as "a first system", "a autonomous second system", "an exception handler" 210 and "a recovery agent" 220 (FIG. 1-2 and related text).

Independent claim 15 directs to "[a]n computing system", which may comprise only software components such as "an exception handler" 210, "a recovery agent" 220, and an analysis tool (FIG. 1-2 and related text).

Claims 1, 10, and 15 amount to Functional Descriptive Material: "Data Structures" representing descriptive material per se or "Computer Programs" representing computer listings per se.

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships

between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions. See MPEP 2106.

Dependent claims 2-8, 11-14, and 17 do not cure the deficiencies as noted above, thus, also amount to Functional Descriptive Material: "Data Structures" representing descriptive material per se or “Computer Programs” representing computer listings per se.

Under the principles of compact prosecution, claims have been examined as the Examiner anticipates the claims will be amended to obviate these 35 USC § 101 issues. For example, - -An exception handling mechanism, stored in one or more computer-readable storage devices, comprising … - - as disclosed in the specification, FIG. 4, computer-readable storage device 416, and related text.

Claim Rejections – 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-8, 10-15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,339,832 to Bowman-Amuah (art made of record, hereafter "Bowman-Amuah").

Claim 1:

Bowman-Amuah discloses *an exception handling mechanism comprising:*

an exception handler for recording exception information (e.g., FIG. 145, col.262: 61 – col.263: 67; col.264: 45 – col.265: 33)

dependant on types of exceptions and programming tasks that encounter exceptions (e.g., FIG. 143, col.260: 54 - col.261: 37; col.263: 28-67; col.264: 9-44; col.265: 61 - col.266: 56)*; and*

a recovery agent for taking an action upon an occurrence of an exception that occurred for a programming task (e.g., FIG. 55, col.193: 41 – col.194: 34; col.93: 24-50)*,*

wherein the action is performed outside of a debugging operation (e.g., FIG.10, Base Services with Batch jobs, col.31: 57 – col.32; 38; FIG. 28, Batch jobs exceptions are handled outside a debugging operation, col.106: 65 – col.109: 34)*;*

wherein the action to be taken upon the occurrence of the exception corresponds to a type of exception and a programming task (e.g., col.260: 54 – col.261: 37; col.263: 28-67; col.264: 9-44)*, and*

includes one or a combination of restarting the programming task, terminating the programming task (e.g., col.30: 12-18; col.92: 38-47; col.98: 24-34)*,*

resetting a system running the programming task, and disregarding the exception (e.g., col.108: 36-59; col.188: 23-51; col.260: 66 – col.261: 41)*,*

wherein the exception handler and the recovery agent run on a first system (e.g., col.16: 14-33; FIG. 55, col.193: 42 - col.194: 34; FIG. 28, batch job exception handling and recovery components, col.106: 65 – col.109: 34)

that operates autonomously and the first system is embedded in a second system (e.g., FIG. 10, col.31: 57 – col.32: 38embedded in a second system as main framework and/or base services; col.264: 45 – col.265: 33; col.294: 66 – col.295: 20).

Claim 2:

The rejection of claim 1 is incorporated. Bowman-Amuah discloses *the recorded exception information associated with an exception is associated with a signature for identifying the recorded exception information with its associated exception* (e.g., col.262: 61 – col.263: 67; col.260: 54 – col.261: 37).

Claim 3:

The rejection of claim 2 is incorporated. Bowman-Amuah discloses *the signature includes a version of a program running the programming task* (e.g., col.93: 24-50; col.193: 41 – col.194: 34).

Claim 4:

The rejection of claim 1 is incorporated. Bowman-Amuah discloses:

a plurality of sets of exception information for a plurality of exceptions is maintained in the system running the programming task (e.g., col.92: 38-47; col.98: 24-34; col.188: 36-51);

each set of exception information being associated with a signature for identifying that set of exception information (e.g., col.98: 24-34; col.193: 42 – col.194: 34).

Claim 5:

The rejection of claim 1 is incorporated. Bowman-Amuah discloses *the recorded exception information associated with an exception is associated with a signature for identifying the format of the exception information* (e.g., col.264: 9-44; col.265: 61 – col.266: 56).

Claim 6:

The rejection of claim 1 is incorporated. Bowman-Amuah discloses *the recorded exception information includes data related to a program stack, including data to reconstruct the program stack at time of exception* (e.g., col.16: 14-33; col.106: 65 – col.109: 34).

Claim 7:

The rejection of claim 1 is incorporated. Bowman-Amuah discloses *an analysis tool communicating via an interface with the system running the programming task, for identifying causes of the exception* (e.g., col.264: 9-44; col.265: 61 – col.266: 56).

Claim 8:

The rejection of claim 7 is incorporated. Bowman-Amuah discloses *the analysis tool uses a version to match the object code of a program running the programming task to the source code of the program* (e.g., col.31: 57 – col.32: 38; col.264: 45 – col.265: 33).

Claim 10:

Bowman-Amuah discloses *a processing system comprising:*

a first system (e.g., FIG. 10, col.31: 57 – col.32: 38; framework and/or base services; col.264: 45 – col.265: 33; FIG. 55, col.193: 42 – col.194: 34)*;*

an autonomous second system embedded in the first system (e.g., FIG. 28, col.106: 65 – col.109: 34; batch job exception handling and recovery; col.264: 45 - col.265: 33)*;*

an exception handler running in the second system for recording exception information upon an occurrence of an exception in the second system (e.g., FIG. 145, col.262: 61 – col.263: 67; col.264: 45 – col.265: 33)*; and*

a recovery agent running on the second system (e.g., FIG. 55, col.193: 41 – col.194: 34; col.93: 24-50),

for taking an action upon the occurrence of the exception based on the recorded exception information, wherein the action is performed outside of a debugging operation (e.g., FIG. 143, col.260: 54 – col.261: 37; col.263: 28-67)*;*

wherein the action corresponds to a type of exception that occurred in a programming task (e.g., col.264: 9-44; col.265: 61 – col.266: 56)*.*

Claim 11:

The rejection of claim is incorporated. Bowman-Amuah discloses *an analysis tool for receiving, via an interface, the recorded exception information from the second system and for identifying the cause of the exception* (e.g., FIG. 55, col.193: 41 – col.194: 34; col.92: 38-47; col.260: 54 – col.261: 37)*.*

Claim 12:

The rejection of claim 10 is incorporated. Bowman-Amuah discloses *the second system includes nonvolatile memory for storing exception information* (e.g., col.262: 61 – col.263: 67; col.106: 65 – col.109: 34; col.193: 42 – col.194: 34)*.*

Claim 13:

The rejection of claim 12 is incorporated. Bowman-Amuah discloses *the exception information stored in the non-volatile memory is compressed* (e.g., col.264: 45 – col.265: 33; col.31: 57 – col.32: 38)*.*

Claim 14:

The rejection of claim 12 is incorporated. Bowman-Amuah discloses *the exception information stored in non-volatile memory includes a plurality of sets of exception information, each set being associated with an exception and a signature* (e.g., col.193: 41 – col.194: 34; col.93: 24-50; col.265: 61 – col.266: 56)*.*

Claim 15:

Bowman-Amuah discloses *a computing system comprising:*

an exception handler for recording exception information on non-volatile memory upon an occurrence of an exception (e.g., FIG. 145,col.262: 61 – col.263: 67)*;*

a recovery agent for taking an action upon the occurrence of the exception (e.g., FIG. 55,col.193: 41 – col.194: 34; col.93: 24-50)

based on the recorded exception information, wherein the action is performed outside of a debugging operation (e.g., FIG. 143, col.260: 54 – col.261: 37; col.92: 38-47; col.108: 36-59)*; and*

an analysis tool for identifying the cause of the exception (e.g., col.263: 28-67; col.264: 9-44; col.265: 61 – col.266: 56)*;*

wherein the analysis tool receives the exception information from the nonvolatile memory via an interface interfacing a first system and a second system running the exception handler (e.g., col.106: 65 – col.109: 34; col.264: 45 – col.265: 33; col.193: 42 – col.194: 34) *and*

the recovery agent wherein the second system is embedded in a third system and the second system operates autonomously of other systems (e.g., FIG. 10, col.31: 57 – col.32: 38; main framework, base services, batch job components, batch job exception handling and recovery agents; col.106: 65 – col.109: 34)*.*

Claim 17:

The rejection of claim 15 is incorporated. Bowman-Amuah discloses *the recorded exception information includes data related to a program stack* (e.g., col.10: 45 - col.12: 49; col.16: 14-33)*.*

Conclusion

9. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone/fax numbers are (571) 272 8570 and (571) 273 8570, respectively. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thuy Dao/
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192